

# (12) United States Patent

# Bordoley et al.

# (54) **EEG KIT**

Inventors: Mordechai Bordoley, Wilton, CT (US); Paul A. Chudy, New York, NY (US); James G. Donnett, St. Albans (GB); Ahmet Omurtag, New York, NY (US); Samah G. Abdel Baki, Brooklyn, NY (US); Andre A. Fenton, New York, NY

(US)

Assignee: Bio-Signal Group Corp., Brooklyn, NY

(US)

Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35

U.S.C. 154(b) by 974 days.

(21) Appl. No.: 13/284,886

(22)Filed: Oct. 29, 2011

(65)**Prior Publication Data** 

US 2012/0143020 A1 Jun. 7, 2012

## Related U.S. Application Data

- (63) Continuation-in-part of application No PCT/US2010/001264, filed on Apr. 29, 2010.
- Provisional application No. 61/214,880, filed on Apr. 29, 2009, provisional application No. 61/448,430, filed on Mar. 2, 2011.
- (51) **Int. Cl.** A61B 5/04 (2006.01)A61B 5/00 (2006.01)A61B 5/11 (2006.01)

(52) U.S. Cl.

CPC ...... A61B 5/721 (2013.01); A61B 5/1114 (2013.01); A61B 5/6803 (2013.01); A61B 5/7232 (2013.01);

(Continued)

# (58) Field of Classification Search

USPC ...... 600/544, 545 See application file for complete search history.

# US 9,408,575 B2 (10) Patent No.:

(45) Date of Patent:

Aug. 9, 2016

#### (56)References Cited

### U.S. PATENT DOCUMENTS

7/1934 Howard ...... 224/674 3,942,517 A 3/1976 Bowles (Continued)

### FOREIGN PATENT DOCUMENTS

12/2003 WO-04000115 A1 WO WO 04000115 A1 \* 12/2003 WO (Continued)

### OTHER PUBLICATIONS

"501(k) Summary (K010460)", Lifelines Ltd., FDA Approval Date: May 14, 2001, 177 pgs.

(Continued)

Primary Examiner — Michael Kahelin Assistant Examiner — Tho Tran (74) Attorney, Agent, or Firm — Schwegman Lundberg & Woessner, P.A.

#### (57)ABSTRACT

An EEG kit can be thought of as "EEG In a Bag" ("EEG-IAB"). The EEG kit can provide a complete, disposable, fast, and easily-used platform to record EEG to measure brain activity. Other physiological information (e.g., oxygen saturation, ECG or EKG, etc.) or other information (e.g., local electrode motion) can also be recorded, such as in timeconcordance with the recorded EEG signals. The recorded EEG and other information can be uplinked to a local or remote user interface. A local or remote neurologist can use the EEG information to render a diagnosis in tens of minutes, wherein such information can currently be unavailable, or can require a number of hours to obtain and diagnose. The EEG kit can be very convenient, and can be used in a hospital emergency department (ED), an intensive care unit (ICU), by a first responder, or can be deployed for emergency or disaster preparedness.

### 24 Claims, 14 Drawing Sheets

